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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s)	:	Hughes et al.
Serial No.	:	09/702,215
Filing Date	:	October 13, 2000
For	:	Apparatus and Method for Wireless Local Area Networks of Different Countries
Group Art Unit	:	2681
Examiner	:	

Temica M. Beamer

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By: Date: May 18, 2005
Oleg F. Kaplun (Reg. No. 45,559)

TRANSMITTAL

In support to the Notice of Appeal filed on February 25, 2005, enclosed please find an Appeal Brief for filing in the above-identified application. Applicants hereby request a one month extension. Please charge the credit card of **Fay Kaplun & Marcin, LLP** in the amount of $620.00 ($500.00 Appeal Brief fee and $120 for extension). The Commissioner is hereby authorized to charge any additional fees to the Deposit Account of **Fay Kaplun & Marcin, LLP No.** 50-1492. A copy of this paper is enclosed for that purpose.

Respectfully submitted,

Dated: May 18, 2005

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PATENT
Attorney Docket No.: 40116 - 03906

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:	)	
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John K. Hughes et al.	)	
	)	
Serial No.: 09/702,215	)	Group Art Unit: 2681
	)	
Filed: October 13, 2000	)	Examiner: Temica M. Beamer
	)	
For: APPARATUS AND METHOD FOR WIRELESS LOCAL AREA NETWORKS OF DIFFERENT COUNTRIES	)	**Board of Patent Appeals and Interferences**

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APPEAL BRIEF UNDER 37 C.F.R. § 41.37

In support of the Notice of Appeal filed on February 25, 2005, and pursuant to 37 C.F.R. § 41.37, Appellants present in triplicate an appeal brief in the above-captioned application.

This is an appeal to the Board of Patent Appeals and Interferences from the Examiner's final rejection of claims 1-43 in the final Office Action dated August 25, 2004. The appealed claims are set forth in the attached Appendix A.

1. Real Party in Interest

This application is assigned to Symbol Technologies, Inc., Holtsville, New York, the real party in interest.

2. Related Appeals and Interferences

There are no other appeals or interferences which would directly affect, be directly affected, or have a bearing on the instant appeal.

3. Status of the Claims

Claims 1-43 have been rejected in the final Office Action. The final rejection of claims 1-43 is being appealed.

4. Status of Amendments

All amendments submitted by Appellants have been entered.

5. Summary of Claimed Subject Matter

The present invention relates to a method and apparatus for adapting a remote terminal to communications requirements of a particular country or geographic region. (*See* Specification, p. 3, ll. 19-22). Although the IEEE 802.11 standard provides specifications for wireless local area network ("WLAN") communications worldwide, there are some variations in WLAN operation from country to country. (*See* Specification, p. 6, ll. 1-14). The present

invention provides for universal remote terminals that automatically adapt to operate in different countries. (*Id.*) When a remote terminal associates with an access point in a new country, the remote terminal may adapt to that country's requirements to suitably operate throughout that country. (Specification, p. 18, ll. 7-10). This in turn substantially reduces the time and money expended in manufacturing different WLAN components for each country. (*See* Specification, p. 6, ll. 1-14).

In one aspect of the present invention, a wireless data communications network, including a remote terminal and one or more access points, is operated to receive announcement messages at the remote terminal. (*See* Specification, p. 3, ll. 23-27). These announcement messages may be transmitted by a transmitter operated in a particular country or by one or more of the access points. (*Id.*; Fig. 4). Each message may have a unique frequency characteristic associated with the geographic location from where it was sent. (*See* Specification, p. 3, ll. 27-29) The remote terminal may then use this characteristic to determine an allowable frequency set in that geographic region and adjust its operating frequency range accordingly. (*See* Specification, p. 3, l. 30 - p. 4, l. 4).

The remote terminal may also request the country specific information. (*See* Specification, p. 15, ll. 8-12). In this operation, the remote terminal may scan frequencies to find a communication channel of a nearby WLAN. (*See* Specification, p. 15, ll. 12-16). A component, such as an access point, of a nearby WLAN may then transmit a communication on a particular channel. (*See* Specification, p. 15, ll. 20-22). The remote terminal may receive this

communication, and then send a probe communications message to the access point. (*See* Specification, p. 15, ll. 26-33). The access point may receive the probe message and transmit a communications message comprising the remote terminal country specific information to the remote terminal. (*See* Specification, p. 16, ll. 8-18). The remote terminal may then adapt to operate based on WLAN operating specifications for the country of the access point. (*See* Specification, p. 16, ll. 19-21).

6. Grounds of Rejection to be Reviewed on Appeal

I. Whether claims 1, 2, 4-11, 13-15, 17-24, 26-28, 30-40, 42 and 43 are unpatentable under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 6,148,203 to Renko et al. ("Renko") in view of U.S. Patent No. 6,292,666 to Siddiqui et al. ("Siddiqui").

II. Whether claims 3, 12, 16, 25, 29, 38, and 41 are unpatentable under 35 U.S.C. § 103(a) as obvious over Renko in view of Siddiqui and further in view of U.S. Patent No. 6,574,266 to Haartsen ("Haartsen").

7. Argument

I. The Rejection of Claims 1, 2, 4-11, 13-15, 17-24, 26-28, 30-40, 42 and 43 Under 35 U.S.C. § 103(a) as Being Obvious Over U.S. Patent No. 6,148,203 to Renko et al. in view of U.S. Patent No. 6,292,666 to Siddiqui et al. Should Be Reversed.

In the Final Office Action, the Examiner rejected claims 1, 14, and 27 under 35 U.S.C. 103(a) as being unpatentable over Renko in view of Siddiqui. (*See* 8/25/04 Office Action, p. 3). Renko relates to a method for registering a wireless communications devices in various regions worldwide. Particularly, the objective of Renko is to establish a means for reducing "the time it takes the communication device to find an appropriate carrier and register." (*See* Renko, Col. 2, ll. 5-6). A communication device stores in its memory a list of frequencies used for wireless communications worldwide. (*See id.* at Col. 2, ll. 25-52). These frequencies are organized by bandmaps, which are the comprehensive lists of all frequencies used in a particular region of the world. (*See id.* at Col. 4, ll. 2-6). The device stores a learned bandmap, which comprises a list of the most recently visited frequencies. (*See id.* at Col. 2, ll. 34-36). It also stores a present regional bandmap, which is a comprehensive list of all frequencies used in the particular region of the world where the device was last shut off, and a worldwide bandmap. (*See id.* at Col. 2, l. 50 – Col. 3, l. 15).

Renko's method of reducing registration time is achieved by realizing that upon powering up, the device will likely be in a familiar region. (*See id.* at Col. 2, ll. 8-11). As such, the device will first scan the learned bandmap to find a suitable primary control channel ("PCCH"). (*See id.* at Col. 4, ll. 26-27). A PCCH is a communication resource transmitted by a serving cell that informs nearby devices of system parameters, such as where to locate a broadcast control channel ("BCCH") to facilitate registration. (*See id.* at Col. 3, ll. 51-56). If no

PCCH is found, the device scans all frequencies of the present regional bandmap. (*See id.* at Col. 2, l. 63). Failure to find a suitable PCCH at this stage indicates that either the communication device is in a new region, or in a weak signal zone, or both. (*See id.* at Col. 3, ll. 32-35). Renko suggests that the most time efficient way to find the PCCH is to alternate between scanning the last used region map and scanning successive sections of the worldwide bandmap. (*See id.* at Col. 2, ll. 19-21). If a PCCH is found during a scan of the worldwide bandmap, the device obtains information about and switches to a BCCH. (*See id.* at Col. 3, ll. 58-63). This enables the device to obtain a public land mobile network ("PLMN") code, which includes a mobile country code ("MCC") and a mobile network code ("MNC"). (*Id.*).

Siddiqui relates to a method of providing updated country information to Mobile Stations ("MSs") within a satellite network. (*See* Siddiqui, Col. 3, ll. 23-25). Within a particular satellite coverage area there are typically a number of different satellite cells, each of which has an associated satellite beam. (*See id.* at Col. 4, ll. 9-13). The beam widths can vary to encompass a cell the size of a large continent or a small state. (*See id.* at Col. 4, ll. 13-15). When the MS is within a satellite cell, it receives cell identification information from a ground segment ("GS") of a satellite Public Land Mobile Network ("PLMN"). (*See id.* at Col. 4, ll. 16-30). The GS typically consists of a Satellite-Adapted Base Station System, Mobile Switching Center, and an associated Visitor Location Register. (*See id.* at Col. 4, ll. 25-28). The MS then stores this identification information in its memory module, e.g. a Subscriber Identity Module ("SIM") card.

(*See id.* at Col. 4, ll. 16-30). If the MS moves from one satellite cell to another, the cell identification information received would differ from that stored in the memory module. If the MS detects that the received cell identification and the stored cell identification are not the same, it performs a location update procedure to register with the GS serving the new satellite cell. (*See id.* at Col. 4, ll. 31-48). In this procedure, the MS sends an update request to the GS serving the new satellite cell for new network identification and registration information, and receives an acknowledgment message from the Mobile Switching Center. (*See id.*). Once the GS is registered for a satellite cell, it may utilize both the satellite and the GS for communications. (*See id.* at Col. 4, ll. 49-55). Depending on the location of the GS and the global positioning system information of the MS, the country in which the MS is located and the distance away from the border may be obtained.

Claim 1 of the present invention recites a universal remote for use in wireless local area networks in a plurality of countries, the terminal comprising circuitry configured to "*scan to find a communications channel carrying a communication for a nearby wireless local area network; send a probe communications message* on the communication channel *in response to finding the communications channel when scanning*" and "*receive a reply communications message* comprising country-specific information from a transmitter in a particular country that was sent *in reply to the probe communications message.*"

Renko fails to disclose sending "a probe communications message on the communication channel in response to finding the communications channel when scanning." Further, the Examiner acknowledged that Renko fails to disclose receiving country-specific information in a reply message sent in response to the remote terminal sending a probe message. (*See* 8/25/04 Office Action, p. 4). However, the Examiner contends that these defects are cured by Siddiqui. In support of this proposition, the Examiner points to Siddiqui's disclosure of a MS which receives cell identification information, and upon roaming into a different cell sends a location update message. (*See* 2/16/05 Advisory Action, ¶ 11).

The Examiner equates scanning "to find a communications channel carrying a communication for a nearby wireless local area network" to Siddiqui's disclosure of an MS roaming into different satellite cells and receiving signals from the cells. (*Id.*). However, these two operations differ substantially. The remote terminal of the present invention is actively performing a scanning function in order to find a suitable communications channel. It is searching for specific data. In contrast, the MS of Siddiqui does not search for anything. The MS merely receives information from the particular satellite cell which covers the vicinity of the MS at that time. Further, because the MS is not scanning for "a communications channel carrying a communication for a nearby wireless local area network," it certainly does not "find" it.

In the rejection of claim 1, the Examiner also appears to equate the probe

communications message recited in claim 1 of the present invention with the location update message described in Siddiqui. As described above, Siddiqui's location update message is part of a location update procedure which is triggered only when the MS moves from one satellite cell into another. Accordingly, the location update message will only be sent if the MS exits one satellite cell and enters into a different satellite cell. It is sent as a request for new network identification and registration information. In contrast, the probe communications message of the present invention is sent "on the communications channel in response to finding the communications channel when scanning." While the location update message of Siddiqui is sent in response to an indication that the satellite cell identification information has changed, the probe communications message of the present invention is sent in response to finding the communications channel when scanning. These events are completely unrelated. As such, Siddiqui does not disclose sending a probe communications message as the Examiner contends.

Because Siddiqui does not disclose sending a probe communications message in response to finding a communication channel when scanning, it could not possibly contemplate receiving "a reply communications message comprising country-specific information... in reply to the probe communications message." Siddiqui does disclose receiving an acknowledgment message in response to the location update request. However, this message does not provide country-specific information as does the reply communications message recited in claim 1 of the present invention. Thus, Siddiqui does not disclose receiving "a reply communications message

comprising country-specific information... in reply to the probe communications message."

Thus, it is respectfully submitted that Renko and Siddiqui, taken alone or in combination, do not anticipate or render obvious a universal remote for use in wireless local area networks in a plurality of countries, the terminal comprising circuitry configured to "*scan to find a communications channel carrying a communication for a nearby wireless local area network; send a probe communications message* on the communication channel *in response to finding the communications channel when scanning*" and "*receive a reply communications message* comprising country-specific information from a transmitter in a particular country that was sent *in reply to the probe communications message*" as recited in claim 1. Therefore, it is respectfully requested that the rejection of claim 1 be reversed. Because claims 2, 4-11, and 13 depend from and, therefore, include all of the limitations of claim 1, it is respectfully submitted that these claims are also allowable, and that the rejections should be reversed.

Claims 14, 27, and 40 of the present invention recite similar limitations to those of claim 1. Accordingly, it is respectfully submitted that these claims are also allowable for at least the reasons discussed above with respect to claim 1. Appellants respectfully request that the rejection of these claims, along with the rejection of dependent claims 15, 17-24, 26, 28, 30-39, 42 and 43, be reversed.

II. The Rejection of Claims 3, 12, 16, 25, 29, 38, and 41 Under 35 U.S.C. § 103(a) as Being Obvious Over Renko in View of Siddiqui and in Further View of U.S. Patent No. 6,574,266 to Haartsen Should Be Reversed.

In the Final Office Action, the Examiner rejected dependent claims 3, 12, 16, 25, 29, 38, and 41 under 35 U.S.C. 103(a) as being unpatentable over Renko in view of Siddiqui and in further view of Haartsen. (*See* 8/25/04 Office Action, p. 7). Renko and Siddiqui have been discussed above. Haartsen describes a system and method for establishing ad hoc communication sessions between remote control terminals. (*See* Haartsen, Abstract).

It is respectfully submitted that Haartsen does not cure the above-noted deficiencies of Renko and Siddiqui. Therefore, Appellant respectfully submits that dependent claims 3, 12, 16, 25, 29, 38, and 41 are allowable for the reasons state above with regard to claim 1. Thus, Appellant respectfully requests that the rejection of these claims be reversed.

8. Conclusions

For the reasons set forth above, Appellants respectfully request that the Board reverse the final rejections of the claims by the Examiner under 35 U.S.C. § 103(a) and indicate that claims 1-43 are allowable.

Respectfully submitted,

Date: 5/18/05

By: _____

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CLAIMS APPENDIX

1. A universal remote terminal for use in wireless local area networks in a plurality of countries, each country having particular communications specifications for operating wireless local area networks in that country, the terminal comprising circuitry configured to:

scan to find a communications channel carrying a communication for a nearby wireless local area network;

send a probe communications message on the communication channel in response to finding the communications channel when scanning;

receive a reply communications message comprising country-specific information from a transmitter in a particular country that was sent in reply to the probe communications message; and

adapt to that country's communications specifications to suitably operate in wireless local area networks in that country in response to receiving the country-specific information.

2. The universal remote terminal of claim 1 wherein the remote terminal is mobile and handheld, and the remote terminal comprises wireless-network-interface resources comprising the circuitry.

3. The universal remote terminal of claim 1 wherein the remote terminal is a desktop personal computer having wireless-network-interface resources comprising the circuitry.

4. The universal remote terminal of claim 1 wherein the circuitry that is configured to scan is configured to scan frequencies for a broadcast transmission.

5. The universal remote terminal of claim 4 wherein the circuitry that is configured to scan is configured to scan for the broadcast transmission when the terminal seeks to associate with a new access point.

6. The universal remote terminal of claim 1 for use in wireless local area networks in which an access point comprises the transmitter, wherein:

the circuitry that is configured to scan is configured to scan a plurality of channels to receive a broadcast transmission when seeking to associate with a new access point;

the circuitry is configured to receive the broadcast transmission on one of the channels; and

the circuitry that is configured to send the probe communications message is configured to send the probe communications message requesting country-specific information on the one channel in response to receiving the broadcast transmission.

7. The universal remote terminal of claim 6 wherein the circuitry is configured to scan channels on which the terminal is operable.

8. The universal remote terminal of claim 1 wherein the circuitry is configured to include a database of communications specifications for a plurality of countries.

9. The universal remote terminal of claim 1 wherein the circuitry is configured to receive the reply communications message comprising country-specific information on that country's communications specification fro the transmitter.

10. The universal remote terminal of claim 9 wherein the circuitry is configured to receive the reply communications message comprising country-specific information comprising a particular set of frequency channels on which wireless local area networks in that country are to operate.

11. The universal remote terminal of claim 9 wherein the circuitry is configured to:

be operable on a plurality of channels; and

receive country-specific information on a particular subset of the plurality of channels on which wireless local area networks in that country are to operate.

12. The universal remote terminal of claim 1 wherein the remote terminal uses spread spectrum communications and the circuitry that is configured to receive is configured to receive country-specific information on variable parameters in spread spectrum communications in the reply communications message.

13. The universal remote terminal of claim 1 wherein the circuitry is configured to receive country-specific information on that country's name in the communications message.

14. A method for use in a remote terminal for use in wireless local area networks in a plurality of countries, each country having particular communications specifications for operating of wireless local area networks in that country, the method comprising:

scanning to find a communications channel carrying a communication for a nearby wireless local area network;

sending a probe communications message on the communication channel in response to finding the communications channel when scanning;

receiving a reply communications message comprising country-specific information that was sent by a transmitter in a particular country in reply to the probe communications message; and

adapting to that country's communications specifications to suitably operate in that country in response to receiving the country-specific information.

15. The method of claim 14 wherein said receiving comprises receiving the communications message at a mobile handheld remote terminal and said adapting comprises adapting at the mobile handheld remote terminal.

16. The method of claim 14 wherein receiving comprises receiving the communications message of the remote terminal where the remote terminal is a desktop personal computer and said adapting comprises adapting of the desktop personal computer.

17. The method of claim 14 wherein said scanning comprises scanning for a broadcast transmission.

18. The method of claim 14 wherein said scanning comprises scanning for the communication that is from an access point when the remote terminal seeks to associate with a new access point.

19. The method of claim 14 wherein:

said scanning comprises scanning to receive a broadcast transmission from an access point when seeking to associate with a new access point; and

said sending comprises sending a probe message requesting country-specific information n response to receiving the broadcast transmission.

20. The method of claim 19 wherein:

said scanning comprises scanning a plurality of channels to receive the broadcast transmission on one of the channels; and

said sending comprises sending the probe message on the one channel on which the broadcast transmission was received.

21. The method of claim 14 further comprising including a database of communications specifications for a plurality of countries at the remote terminal.

22. The method of claim 14 wherein said receiving comprises receiving country-specific information on that country's communications specification from the transmitter.

23. The method of claim 22 wherein said receiving comprises receiving country-specific information comprising information on a particular set of frequency channels on which wireless local area networks in that country are to operate.

24. The method of claim 22 comprising:

using a plurality of channels to communicate in different countries; and

said receiving comprises receiving country-specific information on a particular subset of the plurality of channels on which wireless local area networks in that country are to operate.

25. The method of claim 14 wherein said receiving comprises receiving country-specific information on variable parameters in spread spectrum communications in the reply communications message.

26. The method of claim 14 wherein said receiving comprises receiving country-specific information on that country's name in the communications message.

27. A system for use in a plurality of countries, each country having particular communications specifications for operating wireless local area networks in that country, comprising:

an access point that is operating in a particular country; and

a remote terminal comprising circuitry configured to:

scan to find a communications channel carrying a communication for a nearby wireless local area network;

send a probe communications message on the communication channel in response to finding the communications channel when scanning;

receive a reply communications message comprising country-specific information that was sent by the access point in reply to the probe communications message; and

responsive to receiving the country-specific information, adapt to that country's communications specifications to suitably operate in that country.

28. The system of claim 27 wherein the remote terminal is mobile and handheld, and the remote terminal comprises wireless-network-interface resources comprising the circuitry.

29. The system of claim 27 wherein the remote terminal is a desktop personal computer having wireless-network-interface resources comprising the circuitry.

30. The system of claim 27 wherein the circuitry that is configured to scan is configured to scan frequencies for a broadcast transmission comprising the communications message.

31. The system of claim 30 wherein the circuitry that is configured to scan is configured to scan for the broadcast transmission when the terminal seeks to associate with a new access point.

32. The system of claim 27 wherein:

the circuitry that is configured to scan is configured to scan to receive a broadcast transmission to receive when seeking to associate with a new access point; and

the circuitry that is configured to send is configured to send the probe communications message requesting country-specific information in response to a received broadcast transmission.

33. The system of claim 32 wherein:

the circuitry that is configured to scan is configured to scan a plurality of channels to receive the broadcast transmission on one of the channels; and

the circuitry that is configured to send is configured to send the probe communications message on the one channel on which the broadcast transmission was received.

34. The system of claim 27 wherein the circuitry is configured to include a database of communications specifications for a plurality of countries.

35. The system of claim 27 wherein the circuitry is configured to receive the reply communications message comprising country-specific information on that country's communications specification from the access point.

36. The system of claim 35 wherein the circuitry is configured to receive the reply communications message comprising country-specific information on a particular set of frequency channels on which wireless local area networks in that country are to operate.

37. The system of claim 35 wherein:

the circuitry is configured to use a plurality of channels; and

the circuitry that is configured to receive is configured to receive country-specific information on a particular subset of the plurality of channels on which wireless local area networks in that country are to operate.

38. The system of claim 27 wherein the remote terminal uses spread spectrum communications and the circuitry that is configured to receive is configured to receive country-specific information on variable parameters of spread spectrum communications in the reply communications message.

39. The system of claim 27 wherein the circuitry that is configured to receive is configured to receive country-specific information on that country's name in the communications message.

40. A method of specifying a regulatory assigned subset of channels from a plurality of frequency channels on which communications between a stationary access point and a mobile terminal can be implemented in a wireless local area network, comprising:

activating the mobile terminal to periodically listen on each of said frequency channels;

sending a broadcast transmission from the access point on one of said frequency channels;

sending a response from the mobile terminal on the one frequency channel to the access point in response to the mobile terminal receiving the broadcast transmission;

transmitting information related to the subset of frequency channels from the access point to the mobile terminal; and

storing the information related to the subset of frequency channels in memory in the mobile terminal to define on which frequency channels the mobile terminal is to operate.

41. The method of claim 40 for use in a wireless local area network that uses spread spectrum communications wherein said transmitting further comprises transmitting information related to parameters for spread spectrum communications.

42. The method of claim 40 wherein said transmitting further comprises transmitting information on country name to the mobile terminal.

43. The method of claim 40 further comprising using a database to define on which frequency channels the mobile terminal is to operate based on the stored information.